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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/726,363

12/02/2003

Brian A. Leete

42P11441D

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08/25/2006

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EXAMINER

LEE, CHUN KUAN

ART UNIT

PAPER NUMBER

2181

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/726,363

Applicant(s)

LEETE ET AL.

Examiner

Chun-Kuan (Mike) Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4 and 8-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 8-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 3-4 and 8-11 have been considered but are moot in view of the new ground(s) of rejection. Currently, claims 2, 5-7 and 12-14 are canceled and claims 1, 3-4 and 8-11 are pending for examination. As the current response is a final office action and the examiner rejected the pending claims 1, 3-4 and 8-11 only under nonstatutory obviousness-type double patenting, if the applicant do decide to file a terminal disclaimer, applicant's terminal disclaimer after final office action may be entered, upon determining said terminal disclaimer is properly filed.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 3-4 and 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 1 and 8, it appears unclear regarding the claimed limitation wherein the USB host controller can be higher than the USB 2.0 host controller, as the specification appears to support only up to the USB 2.0 host controller, and further

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more, USB host controller beyond the USB 2.0 version would be something that does not exist, as the newest USB standard is USB 2.0.

As per claims 3-4 and 9-11, claims 3-4 and 9-11 are rejected at least due to direct or indirect dependency on the rejected independent claims 1 and 8.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1, 3-4 and 8-11 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 3-6 and 8-10 of U.S. Patent No. 6,728,801 in view of "Enhance Host Controller Interface Specification for USB".

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5. As per claim 1 and 8, the reference US Patent No. 6,728,801 discloses almost all the functions and characteristics of the instant application. The reference US Patent No. 6,728,801 (in claims 1, 3-4, 6 and 8-9 of the reference US Patent No. 6,728,801) teaches a system and an apparatus comprising:

- a host controller;

- a host controller driver; and

- a plurality of queue heads are directly coupled to the frame list before any split isochronous transaction descriptors where split isochronous transaction descriptors are supported.

The reference US Patent No. 6,728,801 does not expressly teach the system and the apparatus comprising:

- a second host controller;

- a universal serial bus (USB) 2.0 or higher host controller operates to coupling a plurality of queue heads to a frame list, and

- the host controller driver operates to cause the plurality of queue heads to directly coupled to the frame list before coupling any split-isochronous transaction descriptors to the plurality of queue heads, and split-isochronous descriptors are supported by the host controller and the host controller driver.

The Enhance Host Controller Interface Specification for USB teaches:

- a companion host controller (i.e. UHCI or OHCI as the second host controller) (Fig. 1-1 on page 2); and

a USB 2.0 host control driver implementing the scheduling of data transferring (Section 1.2.1 on page 4 under Schedule Interface Space), therefore a USB 2.0 host controller would be implementing the scheduling of data transferring, as the USB 2.0 host controller is the hardware supported by the USB 2.0 host control driver (software) (Section 3, 1st paragraph on page 29), as the scheduling would result in the coupling of the split-isochronous transaction descriptor directly to the frame list before coupling the plurality of queue heads to the split-isochronous transaction descriptor (Fig. 3-1 on page 29), wherein the USB 2.0 host control and USB 2.0 host control driver supports split-isochronous transaction descriptors (i.e. siTD) (Section 3, 2nd paragraph on page 29).

It would have been obvious to implement the reference US Patent No. 6,728,801's host controller as the USB 2.0 host controller and include the companion host controller (i.e. second host controller) for the benefits of providing system power management, minimizing hardware complexity and support for 32 and 64-bit addressing (Enhance Host Controller Interface Specification for USB, Introduction Section on page 1).

6. As per claims 3 and 10, the reference US Patent No. 6,728,801 (in claims 5 and 10 of the reference US Patent No. 6,728,801) discloses almost all the functions and characteristics of the instant application.

7. As per claim 4 and 11, it would have been obvious that the reference US Patent No. 6,728,801 (in claims 1 and 6 of the reference US Patent No. 6,728,801) further

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includes wherein the plurality of queue heads are coupled to the frame list before any split-isochronous transaction descriptors after initialization of the host controller, wherein the initialization is implemented during the determination step, and after the initialization step, the following steps which included the storing and the replacing would result in the plurality of queue heads are coupled to the frame list before any split-isochronous transaction descriptors.

8. As per claim 9, it would have been obvious that the reference US Patent No. 6,728,801 further includes a second host controller associated with said second host controller (i.e. companion host controller driver) (Enhance Host Controller Interface Specification for USB, Fig. 1-1 on page 2).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz M. Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C.K.L.
08/18/2006



KIM HUYNH
SUPERVISORY PATENT EXAMINER

9/24/06